

## **REMARKS/ARGUMENTS**

Claims 8-17 are pending in the present application. Independent claims 8 and 12 have been amended to clarify the features of applicant's claimed method. Furthermore, claim 15 is amended to change its dependency to claim 12 from claim 13. The claim amendments are all entirely supported by the application as originally filed and thus there is no issue of new matter. As this Amendment is being filed concurrently with a Request for Continued Examination, entry of the claim amendments into the file of the application is respectfully solicited.

### **Claim Rejections Under 35 U.S.C. §102**

Claims 8-13, 15 and 17 are rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Wiltzer et al. U.S. Patent No. 6,107,449 (hereinafter "Wiltzer") for the reasons set forth on pp. 2-3 of the Office Action. The rejection is respectfully traversed.

The features distinguishing applicant's method from the disclosure contained in Wiltzer are extensively discussed at pp. 5-8 of the "Amendment and Information Disclosure Statement" filed in this application on February 8, 2008 and those prior arguments are specifically incorporated by reference into this response, wherein the claims have, in addition, been amended to clarify the distinguishing features of the claimed method referred to in the remarks filed on February 8, 2008.

Upon reviewing the present Office Action, the applicant concluded that the Examiner's maintenance of the rejections based on the Wiltzer reference appears due to the fact that the claims as previously presented do not set forth clearly enough the distinguishing features of the method which is the subject of the present claims. Applicant, therefore, has amended independent claims 8 and 12 to introduce therein a description of some of the features of original claim 5 of this application. These added features, which are referred to both in the remarks filed on February 8<sup>th</sup> and in the discussion below, are believed to further distinguish the present method over the disclosure contained in Wiltzer.

The claims (as amended) clearly recite that the claimed method utilizes only one first stage reactor (2) whereas, in the case of Wiltzer, the "first stage" is subdivided into two separate reactors (8, 11). Applicant believes that previously the Examiner may have been confused - by the claim terminology of the previously presented claims - as to the number of reactors used in

applicant's 'first stage'. Combined with the fact that the prepolymer leaving applicant's first stage reactor is defined (see, e.g., ¶26 of applicant's published application, No. US 2005/0209436 A1) as containing water in excess which is evaporated in the melt dryer (4), the apparent misunderstanding of the features of applicant's method referred to above is believed to form the basis of the Examiner's allegation that in the case of the method as described in Wiltzer, the water evaporating in the first stage of the method, i.e., in the first reactor (2) and the melt dryer (4), is passed into the at least one further stage of the method.

It is additionally important to note that Wiltzer describes one embodiment wherein the first stage reactor is operated in a closed mode and all excess water is separated from the prepolymer in the melt dryer. This embodiment only is useful, however, if the amount of excess water is sufficiently small so that a melt dryer is sufficient for driving out excess water, and no rectification column (12) and immersion vessel (14) is required. The present invention does not, however, involve any method wherein, as in Wiltzer, the first reactor is operated in a closed mode.

Upon comparing the drawings which illustrate the presently claimed method with the disclosure contained in Wiltzer, it is noted that the water evaporating into the gas space of the reactor (2) as used in applicant's method or the reactor (11) of Wiltzer still contains the reaction component that are of interest in the method of the present invention. In the case of Wiltzer, the water is passed through a rectification column (12) and an immersion vessel (14) outside of the boundary of the method. As described with regard to the presently claimed method, (see, e.g., paragraph 0012 of Publication No. US 2005/0209436) the main disadvantage of arranging a second reactor (11) in the first stage – as taught by Wiltzer – is the fact that the water evaporating from therein, i.e., leaving immersion vessel (14) still containing reaction components which, thereby, become lost to the system. Furthermore, the water from immersion vessel 14 is at a rather high temperature and, thus, its loss additionally constitutes a significant energy loss from the system. The presently claimed method is, in contrast, not concerned with water being evaporated from the melt dryer (4), but rather, the water evaporating into the gas space of the first stage reactor (2).

Further to the above, in the case of the presently claimed method the water evaporating into the gas space of the first stage reactor (2) is fed to the gas space of the second stage reactor by connecting the first gas space, with pressure control, to the second gas space. Therefore, both

the reaction components contained in the evaporated water of the first stage reactor (2), as well as the (thermal, i.e., heat) energy contained therein, are recovered and used within the at least one further stage. This 'at least one further stage' is the only stage from which water leaves the boundaries of the method, which water leaves via reflux column (8), pressure controller (11) and trap (9) at a much lower temperature than that which leaves in Wiltzer. Thus, the degree of energy loss in the presently claimed method is significantly reduced in comparison to Wiltzer.

Prior to the present invention, i.e., in the case of Wiltzer, both the first and the second stage of the method were provided with gas spaces having their own separate outlets for permitting water evaporation via rectification columns (12 and 19) and immersion vessels (14, 20). Therefore, in the arrangement as disclosed in Wiltzer, both (1) energy and (2) reaction components are lost in the first stage. These losses are avoided, however, in the case of the presently claimed method wherein the losses are avoided by connecting the gas space of the first stage reactor, with pressure control, to the gas space of the at least one second stage reactor. The pressure control, of course, is a required element since the pressures found in the first stage and the second stage of the method are quite different, as would be well understood by one having an ordinary level of skill in this field.

Applicant has, thus, as noted above amended independent claims 8 and 12 to further emphasize the features of the presently claimed method which assist in distinguishing the invention from the method and apparatus as described in Wiltzer. One important area of distinction rests on the fact that there is, for example, no teaching or even a suggestion in Wiltzer of connecting the gas spaces of two reactors in two separate states of the method with one another; that is, Wiltzer does not teach or suggest to feed evaporated water containing reaction components from the first stage to a second reactor having a second gas space which is located in the "at least one further stage" of the method, as now presently recited in applicant's independent claims 8 and 12.

Still further, applicant also respectfully emphasizes that the evaporated water mentioned in the claims refers to the water evaporating into the respective gas spaces, and not the water evaporated in the melt dryers (e.g., Ref. #16 in Wiltzer). It is this water evaporating into the gas space of the first stage reactor that is fed (or passed) to the gas space of the second stage reactor.

For the reasons presented above, therefore, claims 8-13, 15 and 17 are believed to be distinguishable from Wiltzer. The Examiner is, thus, respectfully requested to reconsider and withdraw the §102(b) rejection of the subject claims based on the Wiltzer reference.

### **Claim Rejections Under 35 U.S.C. §103**

Claims 14 and 16 are rejected under 35 U.S.C. §103(a) over the Wiltzer reference for the reasons given on pp. 3-4 of the Office Action. The rejection is respectfully traversed.

Claims 14 and 16 are dependent claims. As such, they contain all of the features recited in the independent claim 12 from which they depend. For the reasons discussed above, *inter alia*, claim 12 is believed to be both novel and non-obvious over Wiltzer. Therefore, claims 14 and 16 which, as noted above, depend from the subject claim, are believed to be distinguishable over the reference for the same reason(s) as Wiltzer.

The Examiner is, thus, respectfully requested to reconsider and withdraw the rejection of claims 14 and 16 over the Wiltzer reference.

### **Double Patenting Rejection**

Claims 8-17 are rejected on the ground of nonstatutory obviousness-type double patenting over claims 1 and 3 of U.S. Patent No. 6,107,449 (Wiltzer) for the reasons given at pp. 5-6 of the Office Action. The rejection is respectfully traversed.

For the reasons above, claims 8-17 as amended are deemed to recite a method that is distinguishable over Wiltzer, i.e., in that the subject reference neither teaches nor even suggests the method as recited in the (amended) claims. As previously argued in the prior response dated February 8, 2008 – and as further demonstrated above – the present amended claims differ from the Wiltzer patent claims in that they (i.e., the present patent claims) are directed to a method wherein water containing reaction products evaporated from the first reaction stage is not separated out; rather, it is passed into what is characterized as “the at least one further stage”. Further, as another distinguishing feature in the case of the presently claimed method water is expelled from the reaction system only in the “at least one further” stage.

As mentioned above, independent claims 8 and 12 have been amended to contain some of the recitations contained in original claim 5 for the purpose of further clarifying the claimed method such that the distinguishing features noted above are now believed to be more clearly

stated in the claim(s). Based on the above, the Examiner is respectfully requested to reconsider and withdraw the double patenting rejection against claims 8-17.

**Summary**

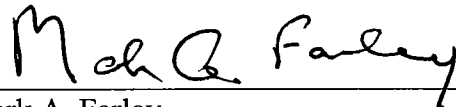
The amended claims and remarks presented herein are believed to overcome all of the grounds for rejection set forth in the present Office Action for this application. As such, the Examiner is respectfully requested to reconsider and withdraw those rejections.

If the Examiner does not agree, but believes that an interview would advance the progress of this case, he is respectfully invited to telephone applicant's representative at the number below in order that such an interview concerning this application may be arranged.

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Respectfully submitted,



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